Grade
11

LEVEL:
SECONDARY

JOIN YOUR MUSCLE JOINTS

OBJECTIVES:

To understand the function of the skeletal system and be able to identify types of muscular movement.

LIFE SKILL:

To promote physical activity and exercise as part of a healthy lifestyle.

TEACHING FACILITY:

Large open area (indoor or outdoor).

INFORMATION:

Ball and Socket Joint. When you throw a baseball, you can swing your arm in a large circle because of the ball and socket joint in your shoulder.

Hinge Joint. When you kick your leg from the knee, you use a hinge joint. A hinge joint is like a hinge that joins a door to a doorway.

Pivot Joint. When you nod your head, one pivot joint moves. This joint connects your head to your neck.

Gliding Joint. When you bend over to pick up an object, the gliding joints in your vertebrae are used. There are small discs or pads of cartilage that lie between these bones.

Muscles work as teams to provide movement. They are arranged in opposing pairs or antagonistic groups. Three common types of movement are: flexion-extension, adduction-abduction, and rotation. In the following examples, the muscles work in opposing pairs to cause movement.

a. Flexion is defined as the decreasing of the angle between two parts of the body.

b. Extension is the increasing of the angle between two parts of the body.

c. Abduction is when part of the body moves away from the midline of the body.

d. Adduction is when part of the body moves toward the midline.

e. Rotation is part of the body moving on its longitudinal axis.

Class Arrangement:

Large group.

Skill Needed:

Basic anatomy (skeletal and muscular systems).

Instructional Strategies:

Have students perform the following exercises. After each exercise, determine the type of movement used.

1. Push-ups — Arm: _____
2. Sit-ups — Trunk: _____
3. Neck circles — Neck: _____
4. Seated toe touch — Trunk: _____
5. Stride jumps — Shoulder or leg: _____
6. Chin-ups — Arm: _____

Have the students perform the following exercises and name the corresponding major bones moved and the type of joint used in each exercise.

Exercise	Major Bones	Type of Joint
(example) bench press	(example) humerus radius ulna	(example) shoulder (ball and socket) elbow (hinge)
sit-ups		
dips		
leg press		
lateral pull-downs		
arm curls		
quadriceps extension		
hamstring curls		

Grade
11

LEVEL:
SECONDARY

HEART TO HEART

OBJECTIVES:

To understand the primary and secondary risk factors associated with coronary heart disease (CHD).

LIFE SKILL:

To promote proper nutrition as part of a healthy lifestyle.

TEACHING FACILITY:

Classroom.

EQUIPMENT/MATERIALS:

"RISKO Matrix" handout (see Grade 11 Handout Masters).

INFORMATION:

Coronary heart disease is related to personal lifestyle health habits known as risk factors. These risk factors cannot be labeled as causes, but are instead characteristics that increase the probability of one's having CHD. The primary risk factors are cigarette smoking, hypertension, and elevated serum cholesterol. These three factors seem to have the greatest impact on the development of CHD. However, the secondary risk factors listed are also of great concern in the development of CHD. Each of these risk factors is related to CHD in an additive fashion: the greater the number of risk factors present, the greater the likelihood of developing CHD. Each of these factors is, at least in part, a function of individual lifestyles and behavior patterns. This observation holds out hope that it may be possible to prevent premature CHD through modification of the risk factors. With the exception of age, sex, race, and heredity, each of the other risk factors can be altered through lifestyle modification.

CLASS ARRANGEMENT:

Individual.

SKILLS NEEDED:

Knowledge of total cholesterol and blood pressure.

Instructional Strategies:

1. Discuss the risk factors with students.

2. Have students self-assess their CHD risk by completing the "RISKO Matrix" handout.

3. Provide students with the following information to assist them during the self-assessment process.

   Age. Older persons generally incur more heart attacks than younger persons.

   Weight. Being overweight causes the heart muscle to work harder than normal.

   Heredity. Determine if parents, grandparents, brothers, and sisters have had a heart attack and/or smoke.

   Tobacco Smoking. If you inhale deeply and smoke a cigarette way down, add one to your classification. Do NOT subtract because you think you do not inhale or smoke only a half inch on a cigarette.

   Exercise. Lower your score one point if you exercise regularly and frequently.

   Cholesterol or Saturated Fat Intake Level. A cholesterol blood level is best. If you can't get one from your doctor, then estimate honestly the percentage of solid fats you eat. These are usually of animal origin—lard, cream, butter, beef, and lamb fat.

   Blood Pressure.Try to obtain a reading from the school nurse.

   Gender. Generally, males are more at risk for heart attacks than are females.

Evaluation/Modification:

List the factors that you might be able to change to reduce your chances of suffering a heart attack.

Grade
11

LEVEL:
SECONDARY

STRESS, EXERCISE AND YOU

OBJECTIVES:

To demonstrate an understanding of stress and the physiological and/or psychological factors that influence the relationship between physical and emotional well-being.

LIFE SKILL:

To promote physical activity and exercise as part of a healthy lifestyle.

TEACHING FACILITY:

Large open area (indoor or outdoor).

EQUIPMENT/MATERIALS:

"Your Ability to Relax" and "Stress, Exercise and You" handouts (see Grade 11 Handout Masters).

INFORMATION:

Physical activity is one of the simplest ways to control stress. Physical activity allows a person to reduce muscular tension. Exercise can help a person cope with stress and prevent stress from becoming a chronic problem.

Physical exercise that requires continuous and rhythmic muscular activity, such as aerobic exercise, also stimulates alpha-wave activity in the brain. These are the same wave patterns commonly seen during periods of meditation and relaxation. Furthermore, during vigorous aerobic exercise lasting 30 minutes or longer, the pituitary gland in the brain releases morphine-like substances called endorphins. These have been known to act as painkillers and seem to induce the soothing, calming affect often associated with aerobic exercise.

CLASS ARRANGEMENT:

Large group.

SKILLS NEEDED:

Basic skills of various sports/activities.

Instructional Strategies:

1. Students will identify and demonstrate methods of taking a pulse rate and recognize the effect stress has on the heart and on other body functions.

2. Students will write out as many physical and emotional responses to stress as they can. Pin these responses to a large figure of a person that can be fastened to a wall or drawn on a chalkboard. The purpose is to show the varied responses people experience when affected by stress.

3. Students will be divided into groups and asked to examine healthful and unhealthful ways of coping with a given stressful situation.

4. Using the "Stress, Exercise and You" handout, students should select one activity of high “stress diversion” value and use as a stress-reducing strategy.

Evaluation/Modification:

Students will complete the "Your Ability to Relax" handout.

Grade
11

LEVEL:
SECONDARY

WHO IS THE HEALTHIEST?

OBJECTIVE:

To explore the meaning of the word “healthy” in society.

LIFE SKILL:

To promote good mental and environmental health practices within families and communities as part of a healthy lifestyle.

TEACHING FACILITY:

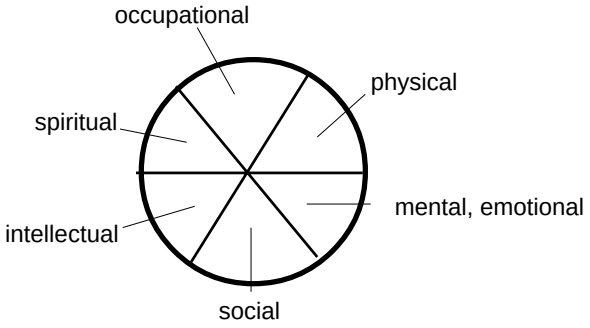
Classroom.

EQUIPMENT/MATERIALS:

Examples of fitness, nutrition, or health magazines (especially front covers), "Who Is the Healthiest?" handout for each student (see Grade 11 Handout Masters), blackboard, chalk.

INFORMATION:

Hetler’s Wellness Model:



CLASS ARRANGEMENT:

- class brainstorming/discussion,
- small group problem solving.

INSTRUCTIONAL STRATEGIES:

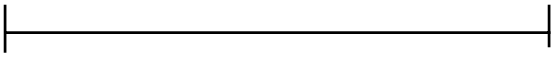
1. Show examples of ways the word “healthy” is utilized and exploited in the media. Ask, “What does the word ‘healthy’ really mean?” As students answer, write all responses on the blackboard. Keep asking the question to evoke responses.

2. Explain to the students some of the background of health, especially the interpretation by most people that health was only used to describe the physical condition. (If you looked healthy, you were deemed healthy!) In 1940 the World Health Organization (WHO) was the first to define health as an interaction of three components: physical, social, and mental/emotional dimensions. Since this first definition there have been many models describing the dimensions of health.

3. Give each student a copy of the handout. Each student is to rank the individuals described in the handout in order of who is the healthiest (1-healthiest; 7-least healthy). There cannot be a "tie." Allow five to eight minutes to complete the handout.

4. Divide students into groups of four. Have each group discuss the individuals in the handout and come up with a consensus ranking as a group. Have each group appoint a speaker. Allow 10 minutes to complete these tasks.

5. Have each speaker report his/her group ranking and rationale. Allow time for discussion after each group. Keep rankings on the blackboard (see below) so that each group can see how others ranked the individuals.



most healthy least healthy

6. Ask the class, "How does society look upon people who. . . ."

   a. are overweight? are underweight?
   b. are active? are sedentary?
   c. use alcohol? abstain from alcohol?
   d. are parents? are not parents?
   e. smoke? do not smoke?
   f. live together? are married? are divorced? are faithful? are unfaithful?
   g. practice birth control? have many children? abstain from sexual activity?
   h. express themselves outwardly? hold in their feelings?
   i. are HIV-positive? get tested for HIV? never get tested for HIV or any STD?
   j. use drugs (examples: marijuana, cocaine)?
   k. eat compulsively? who starve themselves?
   l. stay with the same job for a long time? change jobs frequently?

7. Reconvene into original small groups. Have each group create the optimal "healthy" individual. Share outcomes from each group.

RESOURCE:

Haines, M. DeKalb, IL: Northern Illinois University.

Grade
11

LEVEL:
SECONDARY

AIDS CAN HAPPEN TO YOU

OBJECTIVE:

To identify ways that students can show compassion for persons living with HIV or AIDS and their families.

LIFE SKILL:

To promote good mental and environmental health practices within families and communities as part of a healthy lifestyle.

TEACHING FACILITY:

Classroom.

EQUIPMENT/MATERIALS:

"AIDS Can Happen to You" handout (see Grade 11 Handout Masters).

INFORMATION:

HIV infection occurs in three stages. These stages are (1) infected but showing no ill health (asymptomatic HIV infection), (2) infected and showing some symptoms of ill health (symptomatic HIV infection), and (3) infected and meeting a medical definition of HIV-related complications and related opportunistic infections (AIDS). At every stage of HIV infection, a person is capable of transmitting the virus. The average time from initial infection to death from an opportunistic infection related to AIDS has been eight to ten years.

CLASS ARRANGEMENT:

Discussion and individual writing.

SKILLS NEEDED:

Knowledge of the difference between HIV and AIDS, knowledge of the levels of infection, writing skills.

INSTRUCTIONAL STRATEGIES:

1. Give a copy of the handout to each student to read. After students read the handout, discuss the following:

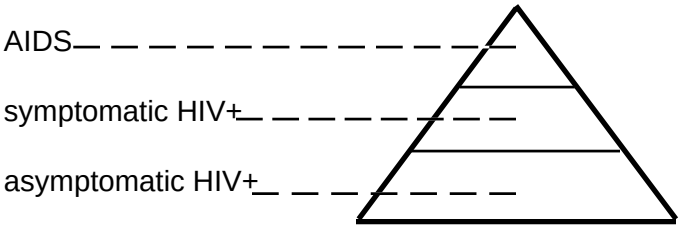
a. Why wasn't Jim concerned that he might become infected with HIV and develop AIDS?

b. Do you believe Jim's lack of concern about becoming infected with HIV as a teenager is common among teenagers you know?

c. How did being HIV positive affect Jim's life?

d. Why do you think Jim's mother wrote this letter for you and others to read?

2. Explain that many persons are HIV positive and will develop AIDS. Draw the pyramid (levels of infection) on the board. A pyramid is appropriate because it also shows that there are more persons who are asymptomatically HIV infected than symptomatically HIV infected and, in turn, then have a full AIDS diagnosis.



Until a cure is found, persons with AIDS (PWAs) and their families live with the knowledge that AIDS is progressive and that eventually the PWA will die. These persons and their families need support and compassion. What are some ways to show compassion? (Know the myths and the facts about HIV infection, be open and honest, share feelings with a PWA, and be supportive with time and energy.)

3. Have the students pretend they knew Jim. Have the students write a letter to Jim's mother expressing sympathy.

Evaluation/Modification:

This activity can be an interdisciplinary assignment with an English or sociology class.

Acknowledgment and Resource Copyright:

Meeks, L. & Heit, P., Burt, J. (1993) *Education for Sexuality and HIV/AIDS: Curriculum and Teaching Strategies*. ™ Blacklick: Meeks Heit Publishing Company, Inc.

Grade
11

LEVEL:
SECONDARY

WHO SPEAKS UP?

OBJECTIVES:

To realize that the prevention of STDs requires both personal and public decision making; to understand that inaction contributes to the spread of disease; to evaluate alternative strategies for stemming the spread of STDs.

LIFE SKILL:

To promote disease prevention as part of a healthy lifestyle.

TEACHING FACILITY:

Classroom.

EQUIPMENT/MATERIALS:

Situation sheets for teachers (see Grade 11 Handout Masters), "Who Speaks Up for Safer Sex?" handout (see Grade 11 Handout Masters).

INFORMATION:

A strong element of shame and guilt surrounds the issue of sexually transmitted disease. Judgments may interfere with confronting these diseases as community health problems and negative feelings discourage communication between partners that is essential for reducing the transmission. This lesson explores the idea that not only the couple that fails to prevent STD is at fault for transmission of the disease, but that parents, teachers, and public officials who fail to educate young people in ways that would enable them to overcome the barriers to effective disease prevention are also at fault. Silence, both public and private, is dangerous. Everyone must speak up.

CLASS ARRANGEMENT:

Small groups.

SKILLS NEEDED:

Comprehension.

INSTRUCTIONAL STRATEGIES:

1. Discuss the question, “If a person gets a sexually transmitted disease, who is responsible?” Explain that this lesson will help students think about all the different people who have a role in reducing the spread of STD in this nation.

2. Explain that you will read a situation regarding responsibility for the control of STD and you will give possible alternatives. One corner of the room will represent each alternative. Each participant will move to the corner representing the alternative they think is best. Once in the corner, they should discuss their choice with others who made the same choice. Individuals from each corner may share their reasons for their choice with the entire class.

3. After the three situations have been discussed, ask participants to return to their seats. Discuss the following:

    a. Which of the situations was the most difficult (being a parent, a partner, or a legislator)? Why?

    b. Should the state have the right to intervene in the lives of individual citizens? If so, under what circumstances?

    c. What do you believe is the most effective way to get people to act so that they do not contract or pass on a STD?

4. Distribute the handout, "Who Speaks Up?" and read it or ask volunteers to read the story. Ask participants to individually rank the characters as directed.

5. Divide the participants into groups of five. Ask the participants to try to reach a group consensus by discussing with each other the reasons for their selections. After 10 minutes bring the groups together for a final discussion.

    a. Did any group reach a consensus on the person they felt most positive about? most negative about? What were the reasons for your choices?

    b. Are the behaviors of these people realistic?

    c. Which of these people is most like you?

    d. Would your ranking be different if Pat were a male and the relationship a homosexual one?

Evaluation/Modification:

Teacher tip: Be sure to identify clearly the corner representing each option.

Follow-up activity: Rewrite the scenario so that every person is taking responsibility for discouraging the spread of STD.

Resource:

1993 Nebraska Comprehensive Health Education Curriculum Guide.

Grade
11

LEVEL:
SECONDARY

SO WHAT'S AN ABSTINENCE ANYWAY?

OBJECTIVES:

To raise awareness of what is needed to make abstinence work; to approach abstinence from a decision-making model.

LIFE SKILL:

To promote disease prevention as part of a healthy lifestyle.

TEACHING FACILITY:

Classroom.

EQUIPMENT/MATERIALS:

- Clear, hard, plastic ball or heart that can be opened (located in craft stores),
- slips of brightly colored paper (3/4" wide and 3" long),
- newsprint and markers,
- chart or list presenting contraceptive methods, typical failure rates and lowest expected failure rates (use medically accurate data for failure rates—see Appendix B for information from the U.S. Public Health Service on the effectiveness of condoms).

INFORMATION:

The rate of pregnancy, HIV infection and other sexually transmitted diseases continues to increase each year. The only 100 percent means of preventing disease or pregnancy is to abstain from sexual intercourse.

The meaning of sexual abstinence is varied. The following points should be made during the lesson:

- Abstinence is a conscious decision to avoid certain activities or behaviors.
- What kinds of things do people commonly abstain from (sweets, alcohol, sex, drugs)?
- Why do people abstain (to make a point, to protect their health, to celebrate religious holidays, to avoid negative consequences)?
- Different people may have different definitions of sexual abstinence. For some it may mean no sexual contact. For others, it might mean no penetration or only "lower-risk" behaviors.

INSTRUCTIONAL STRATEGIES:

Ask students, "What is the best method to use to make sure you don't get pregnant, cause a pregnancy or get an STD?" Students will probably answer "abstinence." See if you can get someone in the group to say that abstinence is 100 percent effective, or ask the group about its level of effectiveness.

Discuss "typical" and "perfect" contraceptive user rates. Tell students abstinence is effective only if it is used perfectly every time. Explain that all methods have failure rates, mostly based on "human error." People sometimes forget to take pills, or don't use a spermicide with a condom, or use a condom incorrectly, causing it to spill or break. Vows of abstinence can also "break" if not used correctly.

Tell the students that to learn how to use any contraceptive, they must know what it is and how it works. Many people have seen a condom or a pack of pills. Ask students:

- Has anyone seen an “abstinence”?
- What does it look like?
- How does it work?

Say to the students, “I happen to have an abstinence here,” or “It’s hard to talk about something that you can’t see, so I brought one.” (If your “abstinence” is heart-shaped, remind the group that abstinence doesn’t have to mean lack of love, intimacy, romance, or sensuality.) Say to the group, “As you can see, the "abstinence" is empty. An empty “abstinence” is like any empty promise--it doesn’t work very well.”

Students should individually brainstorm what makes sexual abstinence work and write their ideas on the slips of colored paper to put into the “abstinence.” Try to elicit some of the following concepts:

- being able to talk to each other
- commitment
- partner cooperation
- assertiveness
- a positive vision for the future
- self-esteem
- alternatives
- awareness of personal values
- self-control
- ability to identify sexual situations
- information
- knowledge of consequences
- belief that you are not invulnerable

Write these items on the board. Talk about each item and how it contributes to effectiveness.

Place the items in the “abstinence.” After all are included, remove one item such as “assertiveness.” Ask what would happen if you had all the other items except that one. Do the same with other items pulled from the “abstinence.”

Discuss other factors that might cause abstinence to fail, such as alcohol and drug use, peer pressure, threat or force. Explain that deciding to use an “abstinence” is similar to deciding to use any contraceptive or safer sex method. Questions to consider include:

- Do you feel comfortable using this?
- Does your partner or future partner agree?
- What are the possible side effects?
- Will you use it every time in a potential sexual situation?

Offer ways to make abstinence work, such as the following:

- Don’t leave your “abstinence” at home or in your health class or in your church or synagogue. Keep it with you at all times. Pills won’t prevent a pregnancy if you forget to take them every day; condoms won’t protect you if they never make it out of their container. Abstinence won’t work if you don’t use it.
- Take out your “abstinence” every once in a while and think about it to reaffirm your commitment. Review your reasons for choosing abstinence. How well is it working? What are the strong points? the weak points?
- Decide when and under what circumstance you will cease to abstain (e.g., when you reach a certain age, when you are in a long-term committed relationship or marriage, if you are with the right person).

Evaluation/Modification:

This activity can also be used to teach parents to talk with their teenagers about postponing sexual involvement.

A similar activity can be used to talk about other abstract ideas, such as self-esteem or love. Have students write all the things someone needs to have good self-esteem or a good relationship and discuss how missing items might affect the concept.

Resource:

Basche, F., Terrell, A., Family Life Educator, Winter 1994-95, 32-34.

Grade
11

LEVEL:
SECONDARY

UNDERSTANDING TOBACCO ECONOMICS

OBJECTIVE:

To understand the economic costs of tobacco use in our country.

LIFE SKILLS:

To discourage the use of alcohol, tobacco and other drugs, and encourage the responsible use of prescription drugs as part of a healthy lifestyle.

TEACHING FACILITY:

Classroom.

EQUIPMENT/MATERIALS:

"Tobacco: Paying the Bill" and "Smoking and Economics" handouts (see Grade 11 Handout Masters).

INFORMATION:

Most people are not fully aware of the magnitude of the economic costs of tobacco. This exercise will help students realize the societal costs of tobacco use.

CLASS ARRANGEMENT:

Large group.

INSTRUCTIONAL STRATEGIES:

The students should be given the following short writing assignment: write down all the ways they can think of that tobacco can cost money. Remind students that purchasing cigarettes is only part of the cost. When they have finished writing, call on volunteers to read their ideas. Distribute the "Tobacco: Paying the Bill" handout to students to complete. Conduct a discussion of the costs of smoking to society.

Ask the students the following questions: **What is the leading cause of cancer in the United States?** (Answer: tobacco use.) **Why are insurance and hospital costs higher due to tobacco?** (Students' answers should reflect that tobacco-related illnesses translate into more hospital stays and thereby affect insurance rates. Remind students that everyone must pay for this burden.) **Why does tobacco use cause a loss in worker wages?** (Answer: Illness related to tobacco use leads to loss of work days.) **Why does tobacco use cause a loss of worker**

productivity? (Answer: Time spent on this habit includes smoking on-the-job.)

Conclude your discussion by pointing out to students that although the financial costs of tobacco are high, loss of life and health costs in our society are the greatest losses. Have the students revise the writing they did before the discussion to include the new categories they have learned concerning the financial costs of tobacco use.

Distribute the handout "Smoking and Economics" to the students and discuss.

RESOURCES:

Discover: Skills for Life, Educational Assessment Company.

Tobacco Free Montana, 825 Helena Avenue, Helena, MT 59601, 442-6556 in Helena or 1-800-LUNG-USA.

Grade
11

LEVEL:
SECONDARY

EATING PATTERNS: PAST-PRESENT-FUTURE

OBJECTIVES:

To analyze eating habits and develop a plan of action to make changes for a healthier lifestyle.

LIFE SKILLS:

To promote proper nutrition as part of a healthy lifestyle; to promote physical activity and exercise as part of a healthy lifestyle.

TEACHING FACILITY:

Classroom.

EQUIPMENT/MATERIALS:

"Eating Patterns: Past-Present-Future," "Lifestyle Habits/Can It Be Changed?/What Could be Done?," and "A Pattern for Daily Food Choices" handouts (see Grade 11 Handout Masters).

INFORMATION:

Exploration, inventions of machinery, commerce, and the exchange of ideas have developed because of our need and desire for appetizing foods. By studying the eating patterns of the past and present, students will have an opportunity to see how eating habits have changed over time. They will then be ready to make future predictions.

Students can apply this exercise as they consider their current eating and exercise habits to decide what plan of action would benefit their health in the future.

CLASS ARRANGEMENT:

Small groups/individuals.

SKILL NEEDED:

Students should be familiar with the pattern of daily food choices based on the Food Guide Pyramid.

INSTRUCTIONAL STRATEGIES:

1. Present the two different meal patterns: one is for a 1942 farm family and the other is for a 1992 wage earner's family. Tell students to study the two meal patterns and then assign small groups of students to complete the handout, "Eating Patterns: Past-Present-Future."

Meal Pattern for a 1942 Farm Family

6:00 a.m. - Breakfast
- Oatmeal
- Butter, sugar & milk
- Sausage (2)
- Fried eggs (2)
- Biscuits & butter
- Grape jelly
- Milk

Noon - Lunch
- Fried chicken (2-3 pieces)
- Gravy
- Mashed potatoes
- Macaroni & cheese
- Green beans
- Onions & cucumbers
- Hot rolls & butter
- Peach cobbler

4:00 p.m. - Snack (taken to field)
- Bologna sandwiches (2) with lettuce & tomato slices
- Iced tea

8:00 p.m. - Supper
- Fried pork chops
- Gravy
- Mashed potatoes
- Buttered English peas
- Cornbread & butter
- Egg custard
- Milk

Meal Pattern for a 1992 Wage Earner

7:00 a.m. - Breakfast
- Ready-to-eat cereal
- Milk

10:00 a.m. - Coffee Break
- Doughnut
- Coffee

Noon - Lunch
- Hamburger
- Potato chips
- Cola

6:00 p.m. - Dinner
- Broiled steak
- Baked potato with butter & sour cream
- Salad with dressing
- Iced tea
- Bread

2. Upon completion of the work sheet, have students share their prediction for meal patterns 50 years from now (when they will be in their 60s and 70s).

Evaluation/Modification:

Distribute the handout, "Lifestyle Habits/Can It Be Changed?/What Can Be Done?" for students to develop their own plan of action. This activity could be completed in class or as homework.

Resources:

Texas Education Agency, Education for Self-Responsibility IV: Nutrition Education.

The American Heart Association. (1989). Food, Fitness, and Fun.

Grade
11

LEVEL:
SECONDARY

FAT ATTACK

OBJECTIVE:

To make wise low-fat food choices as part of self-responsibility for health and wellness.

LIFE SKILL:

To promote proper nutrition as part of a healthy lifestyle.

TEACHING FACILITY:

Classroom.

EQUIPMENT/MATERIALS:

"Fat Attack" handout, "Chicken Supreme" handout (see Grade 11 Handout Masters).

INFORMATION:

Fat transports vitamins and acts as an energy source. It is not necessary to consume a high-fat diet because the body receives energy from three energy-yielding nutrients, carbohydrates, fats, and protein. Fat contains nine calories per gram, carbohydrates contain four calories per gram, and protein contains four calories per gram. Excess amounts of these three nutrients not used for body functions are stored as fat.

Most Americans consume too much fat. A diet high in fat can lead to obesity and certain types of cancer. High-fat diets can lead to elevated blood cholesterol levels. People with abnormally high blood cholesterol levels are in a high-risk group for advanced atherosclerosis, which can lead to heart attacks and strokes.

Atherosclerosis is a hardening of the arteries characterized by a thickening of the artery walls from a buildup of plaque. Plaques are mounds of lipid matter that accumulate on the inner walls of the arteries. Lipid is a term used to describe fats, oils, and fat-related substances. The amount of fat consumed in one day should be below 30 percent of the total calories taken into the diet.

Some ways to reduce fat in the diet include:

- reducing fried foods,
- reading labels for fat content and choosing lower fat foods,
- trimming visible fat from meats,
- reducing the intake of high fat desserts,
- using vegetable protein sources such as dried beans and peas,
- choosing low-fat or fat-free menu items and snack foods.

Class Arrangement:

Individual/small groups.

Skills Needed:

Basic math skills.

Instructional Strategies:

1. Distribute and review the handout, "Fat Attack," with the students. After completion, review the answers with the class.

2. Distribute and review the handout, "Chicken Supreme," with the students, allowing time for completion. Discuss how each type of chicken can fit into an overall plan of healthy eating.

Evaluation/Modification:

Have students evaluate food labels for fat content, and determine if fat can fit into an overall plan of healthy eating.

Resource:

Texas Education Agency, (1992). Education for Self-Responsibility IV: Nutrition Education.

Grade 11

LEVEL: *SECONDARY*

VEGETARIAN STYLE

OBJECTIVE:

To understand how a vegetarian can achieve a nutritionally adequate diet.

LIFE SKILL:

To promote proper nutrition as part of a healthy lifestyle.

TEACHING FACILITY:

Classroom.

EQUIPMENT/MATERIALS:

"Vegetarian Style" handout, "A Pattern for Daily Food Choices" handout (see Grade 11 Handout Masters).

INFORMATION:

Vegetarians eat differing diets depending of the type of vegetarian they are. A vegetarian diet consists of only plant foods such as fruits, vegetables, legumes, nuts, seeds, and grains. All animal products are omitted. A lacto-ovo-vegetarian diet includes plant foods, dairy products, and eggs. A lactovegetarian diet uses plant food with dairy products.

People choose to become vegetarians for a variety of reasons. The following information about protein may help explain the information given on the handout, "Vegetarian Style."

The structural units of protein are called amino acids. Amino acids can be found in every cell of the body. Essential amino acids are those that must be provided by the diet. The body cannot produce essential amino acids sufficiently to meet the body's needs. Complete proteins come only from animal sources such as meat, milk, cheese, eggs, poultry, and fish. They are complete because they supply all of the essential amino acids.

Plant food products are considered incomplete proteins. Incomplete proteins do not contain all of the essential amino acids needed by the body. Plant foods include cereals from various grains, vegetables, fruits, legumes (dried beans and peas), and nuts. Incomplete protein foods eaten in combination provide a complete protein.

Class Arrangement:

Individuals/small groups.

Skill Needed:

Students should be familiar with the pattern for daily food choices from the Food Guide Pyramid.

Instructional Strategies:

1. Discuss the reasons why people choose to become vegetarians.

    - Economic - Animal foods cost more than foods used in a vegetarian diet.
    - Ecological - Animals eat two to ten pounds of grain for each pound of meat produced. Some people choose to eat less meat so that there will be more grain left for food.
    - Philosophical - Many vegetarians do not believe in killing animals. Religious beliefs may discourage or prohibit eating foods that come from animals.
    - Health - Vegetarian diets contain less fat and cholesterol and more fiber. Vegetarians are more likely to be at desired weights and have lower rates of certain kinds of cancer and fewer deaths from heart diseases.

2. Distribute the handout, "Vegetarian Style" and the handout, "A Patten for Daily Food Choices," and have students complete the questions on the work sheet. Discuss answers with class.

Evaluation/Modification:

Have students plan and eat a vegetarian meal at home.

Resource:

Texas Education Agency, (1992). Education for Self-Responsibility: Nutrition Education.

Grade 11

LEVEL: *SECONDARY*

FUELS FOR FITNESS

OBJECTIVE:

To understand how carbohydrates, protein, and fats each play an important role as the body's fuel.

LIFE SKILLS:

To promote proper nutrition as part of a healthy lifestyle; to promote physical activity and exercise as part of a healthy lifestyle.

TEACHING FACILITY:

Classroom.

EQUIPMENT/MATERIALS:

"What You Need to Know About a Training Diet" handout, "Burning Fuel During Exercise" handout (see Grade 11 Handout Masters).

INFORMATION:

Energy (as measured by calories) is supplied primarily by carbohydrates and fat. Only a small amount of protein is used for body fuel.

CARBOHYDRATE (4 calories/gram): Athletes get most of their energy for exercise from carbohydrates. Foods, such as breads, cereals, pastas, fruit, vegetables, and beans, are excellent sources of carbohydrates. Carbohydrates are broken down into glucose during digestion. Any glucose that is not used immediately for energy is either converted to glycogen and stored in the muscles and liver or converted to body fat.

When athletes need energy, they draw on stored glycogen. In fact, muscle glycogen is the major source of fuel during the first half hour of any activity. After 90 to 120 minutes of continuous exercise, the glycogen stores drop to low levels. At this point the muscles start taking up energy from blood glucose. Blood glucose becomes important as fuel during prolonged endurance exercise after muscle glycogen stores have become low.

FAT (9 calories/gram): Fat is also an energy source for athletes. Fat is stored just under the skin and in the muscles of an athlete. But it takes 20 to 30 minutes from the time an athlete starts exercising until fat begins to supply a significant amount of energy. When more fat is burned, less of the stored glycogen is used. Since the glycogen stores are limited and fat stores are abundant, fat is a valuable energy source for athletes involved in endurance events. However, fat cannot be converted to energy as rapidly as carbohydrates; it also requires more oxygen to burn.

Therefore, fat is not a significant energy source for short-term, high-intensity exercise when oxygen is less available. However, fat is a primary energy source for low-intensity, long-duration endurance exercise.

PROTEIN (4 calories/gram): It is possible to use protein for energy although that is one of its least important functions in the body. Only when a person is on a low-carbohydrate diet, starving, or experiencing extreme malnutrition does the body use protein as a direct source of fuel.

Class Arrangement:

Small group/individual.

Skills Needed:

Familiarity with "A Pattern for Daily Food Choices," comprehensive reading skills.

Instructional Strategies:

1. Review the recommendations for the carbohydrate, protein, and fat relationship in the diet. (Carbohydrate = 50-55 percent of total calories; Fat = 30 percent of total calories; and, Protein = 15-20 percent of total calories). Relate this to "A Pattern for Daily Food Choices."

2. Distribute and review "What You Need to Know About a Training Diet" handout.

3. Distribute the "Burning Fuel During Exercise" handout for the students to read. Have students complete questions one and two at the bottom of the handout on a separate piece of paper. Review and discuss their answers.

Evaluation/Modification:

Have the students break up into small groups and plan a training diet for one of the athletes in questions one or two, and/or have each student create a personal training diet relative to his or her own athletic participation.

Resources:

National Dairy Council, (1991). Food Power: A Coach's Guide to Improving Performance (2nd Ed.).

Missouri Department of Health Nutrition Education & Training Program. (1992). Sports Nutrition.

Grade
11

LEVEL:
SECONDARY

ARE YOU READY FOR MARRIAGE?

OBJECTIVES:

To understand what marriage entails, and to obtain skills for deciding the appropriate time to get married.

LIFE SKILL:

To promote good mental and environmental health practices within families and communities as part of a healthy lifestyle.

TEACHING FACILITY:

Classroom.

EQUIPMENT/MATERIALS:

Paper, pencil or pen.

INFORMATION:

Studies show that the younger a couple is when first married, the higher the chance of divorce. Younger couples frequently get married for the wrong reasons (because of pregnancy, independence from parents, or because of romantic ideas). The institution of marriage is suffering because of a lack of commitment in the relationship and idealistic expectations for the relationship.

Prenuptial agreements are becoming more commonplace than ever before. Writing a marriage contract can help the couple talk about issues that they otherwise would not talk about until they are in conflict over the issues. Moreover, if the couple cannot agree on some important matters, this should demonstrate to the couple that marriage may not be in their best interest. The contract takes out the emotional aspects and deals with the practical aspects of marriage. A large percentage of the time, it is the practical aspects that create conflict and too often end marriages.

CLASS ARRANGEMENT:

Classroom.

Instructional Strategies:

1. Have a class discussion on the merits and the drawbacks of getting married.

2. Discuss what is important to the class for a successful marriage.

3. Pair the class up in mixed-sex couples (if there is not an equal number, boyfriends or girlfriends outside the class can be their partner).

4. Have students develop a marriage contract based on the following headings:

    a. Personal Goals and Expectations: Career, school, short-term and long-term goals, place of residence, and lifestyle.

    b. Financial Matters: Separate versus joint assets, living expenses, managing income (who does the bills, separate versus joint checking).

    c. Household Arrangements: Who does the household tasks or how will they be allocated?

    d. Sexual Expectations: Emphasize this is sex after marriage, and follow your district guidelines in regards to sex education. This topic is an important part of a marital relationship but discussion of sexual relationships should be a limited part of this activity.

    e. Children: How many, when, child care and parenting responsibilities, adoption, and discipline.

    f. Relationships With Others: Relatives, with whom and when will you spend holidays, and spending time with own friends.

    g. Duration of Contract, Renegotiation, and Review: How long does the contract last? Is there a need for periodic review? What happens when conflicts cannot be resolved?

    h. Terminating the Contract: What are grounds for terminating the contract? In case the marriage ends, what will be the settlement? Who takes the children in case of divorce?

Evaluation/Modification:

Emphasize it is the process of defining a contract, not the expectation of its legal enforcement, which is important. This activity is meant to help the students clarify their own thinking about how involved a marital relationship is.

Resources:

Melville, K., (1988). Marriage and Family Today. New York, NY: Random House.

Grade 11

LEVEL: *SECONDARY*

IS THE GLASS HALF EMPTY OR HALF FULL?

OBJECTIVE:

To comprehend the difference between being temporarily unhappy and psychologically depressed.

LIFE SKILL:

To promote good mental and environmental health practices within families and communities as part of a healthy lifestyle.

TEACHING FACILITY:

Classroom.

INFORMATION:

People who experience vast amounts of stress are those who believe that stress is caused by external events rather than their reactions to those external events. A saying by Epictetus states: "Men are disturbed not by the things that happen, but by their opinion of the things that happen."

We all react to stress in different ways depending on numerous factors. One way we deal with stress is to blame ourselves for events beyond our control. Many times adolescents who become depressed feel they have no control over their lives which is a fallacy (except to the depressed adolescent). Giving adolescents feelings of control can help them become happier and better able to cope with brief episodes of feeling depressed.

CLASS ARRANGEMENT:

Classroom.

INSTRUCTIONAL STRATEGIES:

1. Conduct a class discussion on what makes a person happy versus unhappy. How much of this is internal or external?

2. Have the class write an essay on an important decision they need to make in their near future.

3. Have them discuss both sides of the decision, “What is the worst thing that could happen to me if I decided this?" When making decisions, people usually create a situation that is not as serious as they perceive. By thinking of the most serious result of their decisions allows for a decrease in their fears. In other words, their rational thinking overrides their emotions.

4. Have students bring their decisions to class for the next period, and ask for volunteers to discuss these decisions.

5. Questions to include: Is the consequence of your decision life or death? How much control do you have over your decision? If it is not a life and death decision, why worry about it? Is it better to do nothing and worry about it or to move on and be comfortable with your decisions?

Evaluation/Modification:

Other activities that could be used: Discuss current events and have the class talk about the positive aspects of these events. The students can also write in a journal for a period of time discussing only positive happenings in their lives. This gives the students a chance to see how much control they have over their happiness.

Without telling the students, change your methods and be positive about everything that goes on in the classroom--grading, discussions, and/or discipline. At the end of the one- or two-week period, discuss with the students how they have felt in the class. Was the optimism contagious? Did they feel better in class? Did they feel a little better about themselves? Did you feel better? (If you are one of those special teachers that are always upbeat and positive, then you can do the opposite and be cranky and negative for one or two weeks and have the same discussion.)

Grade
11

LEVEL:
SECONDARY

PARENTHOOD IS REAL

OBJECTIVE:

To gain awareness of the permanency, demands and joys of parenthood.

LIFE SKILL:

To promote good mental and environmental health practices within families and communities as part of a healthy lifestyle.

TEACHING FACILITY:

Classroom.

EQUIPMENT/MATERIALS:

Two raw eggs and/or 10-pound bag of flour.

INFORMATION:

The world of the adolescent seems very focused on school work, sports activities, music and dance lessons, participation in clubs such as 4-H or Scouts, and just being with friends. Responsibilities to their family's home, business, ranch, or farm may also be included. Many students, however, do not truly understand the reality of time and responsibilities needed to parent a young infant. This activity, which helps students gain awareness of the full-time nature of being a parent, is a classic from home economics classrooms. Upon completion of the activity, students will, indeed, have changed their viewpoint, understanding, and appreciation of the skills required in parenting.

CLASS ARRANGEMENT:

Classroom.

INSTRUCTIONAL STRATEGIES:

1. Students are instructed to purchase a raw egg or a 10-pound bag of flour to pretend it is their baby for a period of time. It is important the period of time includes a weekend. Be sure to have <u>both</u> boys and girls participate in the assignment.

2. Students are to keep their baby with them at all times. If they are participating in an activity and unable to care for their baby (i.e., playing in a soccer game, going to a dance, or going to a movie) they must arrange for a caregiver or babysitter for their infant.

3. During the week, students are to keep a journal about their feelings of being a parent and about parenthood in general. At the conclusion of the week, students are to write a paper summarizing their thoughts. Areas to be included might be:

    a. How was parenting easier or more difficult than you expected? How was parenting different than you expected?
    b. Was there a particular experience that made you proud or satisfied in your parenting role and behavior?
    c. Was there a particular experience that made you unhappy or dissatisfied in your parenting role and behavior?
    d. What one piece of advice would you offer to teenage parents?

4. Students could bring their papers to class and be prepared for discussion either in small groups or as a full class.

Evaluation/Modification:

Safety units could be undertaken simultaneously with this activity, e.g., child safety car seat, child-proofing your home, poison control, etc.

Curriculum planning could occur across classes. For example, in history class parent/child relations during the Civil War or Colonial times could be introduced and compared to the present. In math class, calculations could occur on the costs of child care or baby formula for six months. In social studies classes, parents from different ethnic backgrounds could participate in a panel discussion to highlight how parenting occurs in different cultures. Thus, students would be addressing the demands/joys of parenting in a variety of classes in order to gain a broader perspective.

Grade
11

LEVEL:
SECONDARY

TERATOGENS AND YOU

OBJECTIVES:

To become aware of teratogens students are currently ingesting and their impact on fetal growth and development.

LIFE SKILL:

To promote personal, family, and community safety as part of a healthy lifestyle.

TEACHING FACILITY:

Classroom.

INFORMATION:

Prenatal development begins at "day one" of conception and continues through nine months of pregnancy. Development is affected by a variety of factors, including teratogens. Common teratogens include diseases, drugs, and pollutants. Many diseases, including common viruses, parasites, and sexually transmitted diseases, are teratogenic; examples include rubella (German measles) and HIV.

Many common medicines are teratogenic. However, the most widespread and destructive drugs are tobacco, alcohol, marijuana, and cocaine. Several pollutants, among them lead, mercury, PCBs, and radiation, are teratogenic. Source: Berger, K. S. (1994). The Developing Person Through the Life Span, New York: Worth Publishers.

CLASS ARRANGEMENT:

Classroom.

INSTRUCTIONAL STRATEGIES:

1. Have students keep a log of everything they eat or ingest during a 24-hour period. Be sure to stress the hidden or forgotten items such as gum, breath mints, and beverages.

2. Have students keep a log for 24 hours of all medications, both over the counter and prescription, that they ingest or place on their body. For example, some acne medications that are topically applied.

3. Have students note any health concerns, i.e., fever, cold virus, or pollutants they have come in contact with for 24 hours. Students should also include any chemicals they came in contact with during chemistry or biology labs.

4. Have students write a summary of the teratogens they came in contact with during the 24-hour assignment. During class discuss ways in which they could reduce or eliminate the teratogen if they were pregnant.

   IMPORTANT NOTE! The individual medications of each student is personal and confidential information. Grading and discussion procedures should be planned for and identified to protect each student's confidentiality.

Evaluation/Modification:

Use charts and models to demonstrate stages of development in the human fetus.

Resource:

March of Dimes instructional packet: "You, Me and Others, and Risks and Results: Making Responsible Life Choices."

Grade
11

LEVEL:
SECONDARY

BICYCLE TOURING

OBJECTIVES:

To demonstrate riding techniques for long distance riding and understand the demands and opportunities of touring by bicycle.

LIFE SKILLS:

To promote physical activity and exercise as part of a healthy lifestyle.

TEACHING FACILITY:

Large open area, classroom.

EQUIPMENT/MATERIALS:

Bicycles, helmets, slide projector/screen.

INFORMATION:

Cycle touring can be traveling at your own pace but when your body is in condition by regular cycling you can easily accomplish distances. Trip planning is most important after conditioning. Types of cycling terrain, weather, accommodations, clothing and the type of bicycle are important considerations.

Emergency maneuvers including panic stop, rock dodge and instant turn are important to have mastered. Understanding of road hazards such as sun glare, hill crests, blind curves. Curbs, chuckholes, railroad tracks, slippery places and dogs can present hazards.

Touring is a recreational activity and there are many commercial touring companies that have information to share. But the bicycle tour you plan yourself can be one of the most rewarding experiences there is. Following your own route and itinerary comes close to the level of pure freedom.

SKILLS NEEDED:

Ability to ride a bicycle, stopping, scanning, rock dodging, wearing a properly fitted helmet while riding.

Teaching Strategies:

1. Review riding skills.

2. Invite a touring cyclist to bring their touring bike loaded for a bicycle tour. They may also have slides to share.

Evaluation/Modification:

Plan and ride a distance of 100 miles.

Resources:

PLANNING YOUR OWN BICYCLE TRIP brochure
Adventure Cycling Association
(Bikecentennial) P.O. Box 8308, Missoula, MT 59807-8308 406/721-1776

Bicycle USA
The League of American Wheelmen
190 W. Ostend Street, Suite 120, Baltimore, MD 21230

Effective Cycling Video, University of Montana Western Film Library, 710 S. Atlantic, Dillon, MT 59725, 406/683-7541

Effective Cycling, John Forester, Fifth printing, 1992, The MIT Press
ISBN 0-262-06088-4 (hard)
ISBN 0-262-56026-7 (paper)

Contact local bike shops for local bicycle touring clubs.

Grade

11

Handout Masters

Your Ability to Relax

	Always	Sometimes	Seldom	Never
1. Do you plan your life to include change, i.e., people, activities, places to go, etc.?				
2. Are you free from worries and moods?				
3. Do you find time to relax and/or stretch during the day?				
4. Are you free from nervousness and jittery feelings?				
5. Are you free from headaches and twitches?				
6. Are you free from such habits as scowling, clenching fists, tightening your jaws, hunching your shoulders, or pursing your lips?				
7. When you find yourself becoming tense because of sustained positions, do you relax by doing simple movements?				
8. Can you relax symptoms of tension at will when you find them?				
9. If a nap is taken during the day, do you wake up refreshed?				
10. Are you able to concentrate on one problem at a time?				
11. In sports, games, or hobbies, do you participate with such interest that you are completely absorbed in what you are doing?				
12. Do you wake up in the morning refreshed?				
13. Do you find it easy to get to sleep at night?				
14. Are you able to shut out your worries when you go to bed at night?				
15. Are you able to release tension through simple movements so you can get to sleep?				

Scoring:	Always:	3 points
	Sometimes:	2 points
	Seldom:	1 point
	Never:	0 points
Ratings:	30-45:	High ability to relax
	30-37:	Average ability to relax
	Under 30:	Low ability to relax

Who is the Healthiest?

Jane is 60 pounds overweight although she walks two miles to work every day. She doesn't drink or smoke cigarettes, but she uses marijuana once or twice a month. Her recent cholesterol readings were in the 150 range. She is living with her boyfriend and uses birth control pills. She finds her job very stressful and doesn't deal with pressure very well, yet she is considered an outstanding worker.

Paul has been married for five years, and he and his wife have recently given birth to their fourth child. Paul smokes but doesn't drink. He rarely exercises, and his weight is well under the recommended limits. He is a self-proclaimed TV fanatic, and he especially enjoys watching weekend sporting events. His wife isn't interested in such activities, so he does most of his viewing by himself.

Carol is a vegetarian (cholesterol level is extremely low) who drinks heavily, does not smoke, and exercises rarely. She recently had a spontaneous abortion. Carol has trouble controlling her anger and is basically unhappy. She's been promoted three times in the past year at work.

Steve, a paraplegic, eats a balanced diet and smokes a cigar on occasion but doesn't drink. He swims three days every week. Steve is married with two children and is having an extramarital affair. At times he can become verbally abusive to his wife and kids.

LeeAnn recently tested positive for HIV antibodies. She is slightly overweight and smokes a pack of cigarettes a day. She is in a monogamous relationship at the present time. LeeAnn recently was promoted in the investment company where she works.

Phillip is an avid racquetball player who maintains an ideal weight. He uses cocaine about once a month with friends and drinks a beer every day. Phillip is a compulsive person and, with the exception of his wife, has difficulty maintaining close friendships. He relaxes by listening to electronic music.

Joyce has been a diabetic since birth. She maintains her body weight, drinks occasionally, and doesn't smoke. She recently went through her third divorce, and she has just started her fourth new job in the past two years with a newly located computer firm.

AIDS Can Happen to You!

Jim wasn't concerned about AIDS because he thought AIDS only hit the druggies, and he didn't do drugs. Jim wasn't concerned about AIDS because he thought AIDS only hit those with several sexual partners, and he had only one. Jim wasn't concerned about AIDS because he thought AIDS only hit the poor uneducated minorities, and he was white, educated, and had a good job. Jim wasn't concerned about AIDS because he thought AIDS only hit people who were poorly nourished and had poor health habits, and he ate carefully, didn't smoke, and prided himself with regular workouts and running marathons. Jim wasn't concerned about AIDS because he thought AIDS only hit the unhealthy, and he had regular physical and dental check-ups.

But, Jim tested positive to HIV. He still wasn't going to get AIDS because he was really taking care of himself--6'2" tall, 180 pounds, and feeling great! But, Jim did get AIDS. He missed three months of work because of pneumonia, but then again felt great, and was back to work and running marathons. Jim was going to beat this disease. But no one beats AIDS, and after 18 months Jim was too ill to work.

After a year Jim was too sick to take care of himself. And, after another year he had six major diseases, was taking 26 medications by mouth, and having constant intravenous drugs and several units of blood per week.

Jim died from AIDS-related causes as a young man with a college education, a nice car and a good job, and a lot of living to do. Jim was infected with HIV as a teenager.

Jim was my only son. If AIDS can happen to Jim, AIDS can happen to you!

Sincerely,

Ruth (Jim's mother)

Acknowledgment and Resource Copyright:

Meeks, L. & Heit, P., Burt, J. (1993) *Education for Sexuality and HIV/AIDS: Curriculum and Teaching Strategies*. ™ Blacklick: Meeks Heit Publishing Company, Inc.

SITUATION SHEET
(FOR TEACHERS)

Situation #1:

You are the parent of a 17 year old. You have just read an article about the epidemic of chlamydia and gonorrhea among American youth who are 15 to 24 years of age. You are also concerned about HIV. Would you:

A. have a heart-to-heart talk with your child, advocating abstaining from sexual intercourse?

B. buy a book on safer sex and suggest your teen read it?

Situation #2:

You are 17, and you are in a relationship that is moving toward intercourse. Would you:

A. suggest you and your partner have an HIV test before having intercourse?

B. abstain from any risky behaviors, enjoy “outercourse” only?

C. buy condoms and insist they be used?

D. figure that there’s not much risk involved so you won’t need to practice abstinence or use a barrier?

Situation #3:

You are a state legislator in a state with a high incidence of AIDS as well as other STD. You are up for re-election, and there’s a growing public demand for state action regarding the health care crisis. Would you determine your #1 priority to be to:

A. vote to require that everyone has a blood test for HIV antibody as well as other STD tests before getting a marriage license?

B. allocate funds for statewide free distribution of condoms along with clear instructions on how to use them?

C. vote for a Family Life Education mandate that would require comprehensive, age appropriate family life education at every grade level from kindergarten to college?

D. vote that it be a felony for anyone to have intercourse if they have any type of sexually transmitted disease?

WHO SPEAKS UP FOR SAFER SEX?

Pat and Terry were in love, but they hadn't had intercourse; in fact, neither had had intercourse with anyone. They had lots of fun together and were taking it slow. Then Pat went to the shore to work for the summer. They planned to write, talk on the phone, and resume their relationship in the fall.

At the shore Pat met Willie—a really hot guy. Willie was anybody's ideal and VERY experienced. The relationship became very sexual very quickly. Willie made it very clear that sex was part of the deal, and even as Pat was saying "no," they had intercourse. Pat was swept away with the excitement of being Willie's steady, and the romance dominated the summer. But when it was over, Willie made it clear that that was the end of it . . . he had other plans back at college.

Pat returned home confused, guilty, and unable to tell Terry anything about the summer romance. A week later Willie called to say he had gonorrhea and that Pat should go to the STD clinic to be checked. Pat panicked but decided to wait a week to see if symptoms appeared. When none appeared, Pat decided there was probably no gonorrhea infection.

Meanwhile, Pat and Terry had resumed their relationship, and Pat realized that her love for Steve was real. Her summer infatuation was definitely over—not an entirely pleasant memory. When she and Terry began to move toward intercourse, Pat said they'd better use condoms. Terry absolutely refused. Condoms were for people who slept around! She tried to persuade him but couldn't change his mind. The problem was that Terry knew Pat was taking the pill in order to prevent bad menstrual cramps. Pat didn't know what reason to give for using condoms without telling Steve about the summer romance.

Pat tried to talk with her mom. Pat said she knew a girl who thought she might have an STD. Her mom said: "That's exactly what happens with all these kids having sex these days!" Pat said no more.

In health class they were due for some lessons on STD, but Mr. Bennett was not very comfortable talking about sex. Furthermore, he thought that all this teaching about "safer sex" really gives kids permission to go ahead and do it! Somehow, he used up the eight weeks of health teaching about the dangers of drugs and alcohol.

Finally, Pat gave in. She and Terry had intercourse without using any protection. In two weeks Terry reported an itching and burning in his penis.

Rank below your feeling about these five characters. Number 1 would be the person who behaved most honorably, ethically, appropriately. Rank the rest down to "5," the person whose behavior was the worst from your point of view.

____ Pat
____ Terry
____ Willie
____ Mother
____ Mr. Bennett

Tobacco: Paying the Bill

Health Bill

Lung disease	90% of total
Coronary deaths	30% of total
Cancer deaths	80% of total
Total cost due to tobacco use:	**1,000 deaths per day**

Financial Bill	Your Estimates
Higher insurance rates	$
Lost worker production	$
Lost wages	$
Hospital costs	$
Higher taxes	$
Total cost due to tobacco use:	**More than $50 billion per year**

Adapted with permission from: Discover: Skills for Life (7th), p. 14, Educational Assessment Company.

California Department of Education—Health Kids Tobacco-Free Training
Funded by California Tobacco Tax

Smoking and Economics

Cigarette smoking takes many lives prematurely each year in Montana, a problem which affects smokers—and even those who choose not to smoke. As a matter of fact, the economic toll associated with the excess morbidity, mortality, disability and loss of work productivity is staggering. The economic costs of smoking can be translated into direct health care costs for medical and dental care and into indirect costs which stem from sickness, premature death, disability and lost wages. Taken together, these numbers shed new light on the subject of cigarette smoking and question its place in modern day society.

General Statistics

- Cigarette smoking kills nearly 1,200 Montanans each year. That is nearly one out of every five deaths in the state.

- In Montana, 18 percent of adults smoke, and 23 percent of youth smoke. This totals approximately 125,000 residents filling the air with carcinogenic environmental tobacco smoke.

Economic Statistics:

- Over $32 million is spent each year in Montana by our health care system to treat smoking attributable disease and illness. This includes hospitalizations, physician fees, nursing home expenses, medications and fees of other professionals.

- An additional $13 million is wasted needlessly on the indirect morbidity costs of smoking, such as lost wages from work due to sickness or disability.

Hospitalization:	$22,133,761
Physician fees:	5,159,116
Nursing home	2,750,606
Medications	2,049,771
Other professionals	165,522
Indirect morbidity	13,557,872
TOTAL	**$45,816,648**

- Nearly 200,000 days of work productivity are lost each year in Montana due to smoking attributable sickness and/or disability.

Name:_____ Date:_____

Eating Patterns:
Past—Present—Future

Compare the meal patterns provided for 1942 and 1992 with "Appendix: A Pattern for Daily Food Choices." Write the food eaten from each food group in the columns below; then on your own paper, answer the questions at the bottom of the page.

Daily Food Choice Groups	1942 Farmer's Daily Meal Pattern	1992 Wage Earner's Daily Meal Pattern
Vegetables		
Fruits		
Bread, Cereals, Rice, and Pasta		
Milk, Yogurt, and Cheese		
Meat, Poultry, Fish, Dry Beans and Peas, Eggs, Nuts, and Seeds		
Other		

1. List the food groups and number of servings missing from each day's menus. List suggested improvements for each daily meal pattern.

2. Analyze the need for differences in the size of the two meal patterns. Explain your ideas in several paragraphs.

3. Predict the difference in the amount of exercise between the two families' lifestyles. What suggestions would you make for the wage earner?

4. Predict the number of hours of sleep that the farmer received; the wage earner received.

5. Explain your predictions for meal patterns 50 years from now, considering the jobs and lifestyles, the availability of convenience and space-age foods, and the knowledge of nutrition in relation to disease prevention and the individual's wellness.

Name_____ Date_____

Vegetarian Style

Protein is the main component of every cell in the human body. Without protein, the human body would not be able to survive. Protein performs three very important functions:

- Growth and repair of new and damaged tissues
- Regulating body functions and transporting other nutrients and oxygen throughout the body
- Supplying energy when adequate amounts are not supplied by carbohydrates and fats

Vegetarians get their protein by combining foods. The amino acids that one food is missing must be supplied by another food. Examples of combinations of foods with incomplete proteins that produce the equivalent of complete proteins include the following:

- legumes and rice
- whole wheat bread and peanut butter
- leafy vegetables, legumes and cereals
- cereal and milk
- lentils and rice
- beans and corn
- macaroni and cheese

Plant foods are usually high in fiber. The fiber may affect the body's ability to digest the plant protein found in vegetables. This can make it more difficult to consume adequate protein levels. Most plant foods are not only high in fiber, but also low in calories. If a person does not consume enough calories, the body must rely on protein to provide the body's energy supply. Sufficient calories, preferably from complex carbohydrates, must be included in the diet to keep the body from using protein as an energy source.

Another problem can occur when a person does not eat animal protein. A lack of foods from animal origin may result in a deficiency of vitamin B12. Vitamin B12 is found only in foods of animal origin. Individuals who do not eat animal protein need to supplement their diets with vitamin B12.

1. List two pros and two cons to eating a vegetarian diet.

2. Create a lactovegetarian (a diet that includes dairy products as well as plant food) menu for one day using the handout, "A Pattern for Daily Food Choices," and the list of ways to combine incomplete proteins found above. Make sure that you include all the necessary servings of foods as stated in the pattern. Note that dry beans, peas, nuts, and seeds can be included in a vegetarian diet to meet protein needs as long as they are combined with other plant foods to balance them out. The meal pattern should include breakfast, lunch, dinner, and as many snacks as necessary to provide needed servings.

3. Why is it good to include meatless meals in your diet if you are trying to reduce the amount of fat you consume?

Bonus Question: Why would you think there might be more vegetarians in the United States in five years?

Burning Fuel During Exercise

Athletes burn different amounts of carbohydrate and fat depending on the intensity, duration, and frequency of exercise. Based on intensity and duration, exercise is either anaerobic or aerobic.

Anaerobic exercises are usually high-intensity, short-duration events like the 200-yard dash, 50-yard swim, and weight lifting. Football, baseball, volleyball, and some track and field events are also anaerobic—using a quick burst of energy for a short period of time. Anaerobic exercises are usually too intense for the respiratory and circulatory systems to supply the oxygen needed for working muscles. In effect, anaerobic exercises are done in the absence of oxygen. In all these sports, athletes burn primarily glycogen. The bursts of activity in these sports don't last long. However, if several short bursts of activity are strung together, it is possible that these activities can significantly reduce glycogen stores.

The body has only a limited supply of glycogen. A total of about 1500 calories or 375 grams of carbohydrate are normally stored in the muscles and liver (275 grams in muscles; 100 grams in liver). This is enough glycogen to last for about two hours during an endurance event. Running out of glycogen is often called "hitting the wall."

Aerobic exercises are low and moderate in intensity and long in duration—for example, marathon running, distance swimming, cycling, recreational jogging, and hiking. In these activities, the muscles get most of the oxygen they need. About 70 percent of the fuel comes from glycogen, while the rest comes from fat.

Some activities, like basketball, swimming, and middle-distance running are intense, but are performed for only 5-10 minutes. In these activities, glycogen is the primary fuel.

The frequency of the activity also affects the fuels burned. Hard physical training, day after day, can use up most of the glycogen in the muscles. Each muscle has only a limited store of glycogen. And when that's reduced to low levels, athletes are exhausted. Many "bad days" may really be caused by low levels of glycogen in the muscles.

Analyze each athlete's sport relative to their fuel needs (anaerobic vs. aerobic).

1. Kyle likes to run marathons. What is his exercise classification? Why? What other sports could be characterized under this classification?

2. Carrie is a sprinter. Her favorite event is the 100-meter dash. What is her exercise classification? Why? What other sports could be characterized under this classification?